Sheet 1 of 3

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 09010-029011	Application No. 10/601,319
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Short, et al.	
		Filing Date June 20, 2003	Group Art Unit Unknown 1652

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
JR	AA	5,366,736	Nov 22, 1994	Edwards, Jr.			
	AB	5,436,156	July 25, 1995	Van Gorcom et al.			
	AC	5,593,963	Jan 14, 1997	Van Ooijen et al.			
	AD	5,830,696	Nov 3, 1998	Short			
	AE	5,939,303	Aug 17, 1999	Cheng, et al.			
	AF	6,190,897	Feb 20, 2001	Kretz			
JR	AG	5,284,933	Feb 8, 1994	Dobeli et al.			
	AH						
	AI						
	AJ						
	AK						

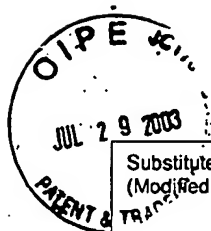
Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
JR	AL	WO 99/08539	Feb 25, 1999	PCT WIPO				
JR	AM	0897985A2	Feb 24, 1999	EP EPO				
JR	AN	0282042B1	June 8, 1994	EP EPO				
	AO							
	AP							

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
JR	AQ	Henrik Brinch-Pedersen, Annette Olesen, Soren K. Rasmussen & Preben B. Holm, "Generation of Transgenic Wheat (<i>Triticum aestivum</i> L.) for Constitutive Accumulation of an <i>Aspergillus</i> Phytase", 2000, <i>Molecular Breeding</i> , pp. 195-206
JR	AR	Janie Dassa, Christian Marck, and Paul L. Boquet, "The Complete Nucleotide Sequence of the <i>Escherichia coli</i> Gene <i>appA</i> Reveals Significant Homology between pH 2.5 Acid Phosphatase and Glucose-1-Phosphatase", September, 1990, <i>Journal of Bacteriology</i> , Vol 172, No. 9, pp. 5497-5500
JR	AS	J. Dvorakova, "Phytase: Sources, Preparation and Exploitation", 1998, <i>Folia Microbiol</i> , Vol. 43(4), pp. 323-338

Examiner Signature 	Date Considered 7/10/06
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Disclosure Form (PTO-1449)

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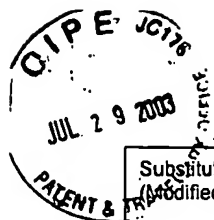


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Other Documents (include Author, Title, Date, and Place of Publication)

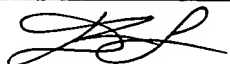
Examiner Initial	Desig. ID	Document
JR	AT	Lori Giver, Anne Gershenson, Per-Ola Freskgard, and Frances H. Arnold, "Directed Evolution of a Thermostable Esterase", October, 1998, <u>National Academy of Sciences</u> , Vol. 95, pp. 12809-12813
	AU	R. Greiner, U. Konietzny, and Kl.-D. Jany, "Purification and Characterization of Two Phytases from <i>Escherichia coli</i> ", May 15, 1993, <u>Archives of Biochemistry and Biophysics</u> , Vol. 303, No. 1, pp. 107-113
	AV	M. Lehmann, L. Pasamontes, s. F. Lassen, M. Wyss, "The Consensus Concept for Thermostability Engineering of Proteins", 2000, <u>Biochimica et Biophysica Acta</u> , Vol. 1543, pp. 408-415
	AW	Lutz Jermutus, Michel Tessier, Luis Pasamontes, Adolphus P.G.M. van Loon, and Martin Lehmann, "Structure-based Chimeric Enzymes as an Alternative to Directed Enzyme Evolution: Phytase as a Test Case", 2001, <u>Journal of Biotechnology</u> Vol. 85, pp. 15-24
	AX	William R. Pearson and David J. Lipman, "Improved Tools for Biological Sequence Comparison", April 1988, <u>National Academy of Sciences</u> , Vol. 85, pp. 2444-2448
	AY	Jan Pen, Theo C. Verwoerd, Peter A. vanParidon, Rob F. Beudeker, Peter J.M. van den Elzen, Kees Geerse, Jan D. van der Klis, Hans A. J. Versteegh, Albert J.J. van Ooyen and Andre' Hoekema, "Phytase-containing Transgenic Seeds as a Novel Feed Additive for Improved Phosphorus Utilization", July, 1993, <u>Bio/Technology</u> Vol. 11, pp. 79-82
	AZ	Eric Rodriguez, Yanming Han, and Xin Gen Lei, "Cloning, Sequencing, and Expression of an <i>Escherichia coli</i> Acid Phosphatase/Phytase Gene (appA2) Isolated from Pig Colon", 1999, <u>Biochemical and Biophysical Research Communications</u> , Vol. 257, pp. 117-123
	AAA	J. Rozas and R. Rozas, "DnaSP, DNA Sequence Polymorphism: An Interactive Program for Estimating Population Genetics Parameters from DNA Sequence Data", 1995, <u>Cabios</u> , Vol. 11 No. 6, pp. 61-625
	ABB	Andrea Tomschy, Michel Tessier, Markus Wyss, Roland Brugger, Clemens Broger, Line Schnoebelen, Adolphus P.G.M. van Loon, and Luis Pasamontes, "Optimization of the Catalytic Properties of <i>Aspergillus fumigatus</i> Phytase Based on the Three-dimensional Structure", 2000, <u>Protein Science</u> , pp. 1304-1311
	ACC	T. C. Verwoerd, A. Hoekema, P. A. van Paridon, A.J.J. van Ooyen, & J. Pen, "Phytase-enriched Transgenic Seeds as a Novel Feed Additive", 1993, <u>Med. Fac. Landbouww. Univ. Gent</u> . No. 58/4a, pp. 1719-1721
	ADD	Costantino Vetriani, Dennis L. Maeder, Nicola tolliday, Kitty S.-P. Yip, Timothy J. Stillman, K. Linda Britton, David W. Rice, Horst H. Klump, and Frank T. Robb, "Protein Thermostability Above 100°C: A Key Role for Ionic Interactions", October, 1998, <u>National Academy of Sciences</u> , Vol. 95, pp. 12300-12305
	AEE	Gunnar von Heijne, A New Method for Predicting Signal Sequence Cleavage Sites", 1986, <u>Research Group for Theoretical Biophysics</u> , pp. 4683-4690
	AFF	Markus Wyss, Roland Brugger, Alexandra Kronenberger, Roland Remy, Rachel Fimbel, Gottfried Oesterhelt, Martin Lehmann, and Adolphus P.G.M. van Loon, February, 1999, <u>Applied and Environmental Microbiology</u> , Vol. 65, No. 2, pp. 367-373
	AGG	Golovan et al., Characterization and overproduction of the <i>Escherichia coli</i> appA encoded bifunctional enzyme that exhibits both phytase and acid phosphatase activities", <u>Canadian Journal of Microbiology</u> , Vol. 46, No. 1, pp. 59-71, January, 2000
JR	AHH	Altschul, et al., "Basic Local Alignment Search Tool", <u>J. Mol. Bio.</u> , Vol. 215, pp. 403-410, 1990

Examiner Signature 	Date Considered 7/10/06
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Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Short, et al.	
		Filing Date June 20, 2003	Group Art Unit Unknown 1652

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
DN	AII	Database accession No. AR130956, 1993 2001
	AJJ	Database accession No. AAX26540, 2005
	AKK	Database accession No. P07102, 1993
	ALL	Database accession No. A02249, 1994
	AMM	Bork, "Powers and Pitfalls in Sequence Analysis: The 70% Hurdle", <u>Genome Research</u> , Vol. 10, pp. 398-400, 2000
	ANN	Broun, et al., "Catalytic Plasticity of Fatty Acid Modification Enzymes Underlying Chemical Diversity of Plant Lipids", <u>Science</u> , Vol. 282, pp. 1315-1317, 13 November 1998
	AOO	Van de Loo, et al., "An oleate 12-hydroxylase from <i>Ricinus communis</i> L. is a fatty acyl desaturase homolog", <u>Proc. Natl. Acad. Sci.</u> , Vol. 2, pp. 6743-6747, 1995
	APP	Seffernick, et al., "Melamine Deaminase and Atrazine Chlorohydrolase: 98 percent Identical but Functionally Different", <u>Journal of Bacteriology</u> , Vol. 183, No. 8; pp. 2405-1410, April, 2001
	AQQ	Arnold, "Enzyme engineering reaches the boiling point", <u>Proc. Natl. Acad. Sci.</u> , pp. 2035-2036, March 1998
	ARR	Lehmann, et al., "Exchanging the active site between phytases for altering the functional properties of the enzyme", <u>Protein Science</u> , pp. 1866-1872, 2000
DN	ASS	Lehmann, et al, "From DNA sequence to improved functionality: using protein sequence comparisons to rapidly design a thermostable consensus phytase", <u>Protein Engineering</u> , Vol. 13, No. 1, pp. 49-57, 2000
	ATT	

Examiner Signature 	Date Considered 7/10/06
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Substitute Disclosure Form (PTO-1449)

Form PTO-1449

INFORMATION DISCLOSURE CITATION
IN AN APPLICATION

Docket Number 564462001824

Application Number 10/601,319

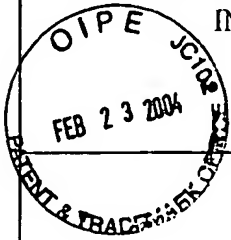
Applicant

Jay SHORT et al.

Filing Date June 20, 2003

Group Art Unit ~~To Be Assigned~~

Mailing Date February 19, 2004



U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate
JL	1.	11/1998	5,830,732	Mochizuki et al.	435	195	

FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO

OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title
JL	2.	Greiner et al., Archives of Biochemistry and Biophysics 34(2):201-206 (1997)
JL	3.	Institute of Applied Environmental Economics (TME) of the Netherlands, "Use of Phytase in Pig and Poultry Feed to Reduce Phosphorus Excretion," (1995)

EXAMINER:

JL

DATE CONSIDERED:

7/10/06

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

Form PTO-1449

Docket Number 564462001824

Application Number 10/601,319


 INFORMATION DISCLOSURE CITATION
IN AN APPLICATION

Applicant

Jay M. SHORT et al.

Filing Date June 20, 2003

Group Art Unit 1652

Mailing Date September 14, 2004

U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate

FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO
<i>mn</i>	1.	11/2000	WO 00/64247	WIPO			

OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title
<i>bn</i>	2.	Bae et al., Geneseq accession number ABK12514, December 15, 1999
	3.	Forsberg et al., Geneseq accession number AAC68296, November 2, 2000
	4.	Forsberg et al., Geneseq accession number AAC68299, November 2, 2000
	5.	International Search Report mailed on July 27, 2004, for PCT patent application no. PCT/US02/16482 filed on May 24, 2002, 9 pages
	6.	Ostanin et al., GenBank accession number L03371 (1992)
<i>mn</i>	7.	Ostanin et al., J Biol Chem 267(32):22830-22836 (1992)

EXAMINER:

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DATE CONSIDERED:

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ALTERNATIVE TO PTO/SB/08a/b (06-03)

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	10/601,319
				Filing Date	June 20, 2003
				First Named Inventor	Jay M. SHORT
				Art Unit	1652
				Examiner Name	D. M. Ramirez
Sheet	1	of	2	Attorney Docket Number	564462001824

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
DL	1.	US-5,750,135	05-12-1998	Schleicher et al.	
DL	2.	US-6,039,942	03-21-2000	Lassen et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
DL	3.	GB-2316082	02/1998			
	4.	KR-99086028	12/1999			
	5.	WO-00/58481	10/2000			
	6.	WO-00/64247	11/2000			
DL	7.	WO-00/71728	11/2000			


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NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²	
DL	8.	BERKA et al., Applied and Environ. Biol. (1998) 64:4423-4427		
	9.	BOQUET et al., J. of Bacteriology (1987) 169:1663-1669		
	10.	CASEY and WALSH, J. Biotechnol. (2004) 110:313-322		
	11.	DELAGRAVE et al., Protein Eng. (1993) 6:327-331		
	12.	DELAGRAVE et al., Nature Biotech. (1993) 11:1548-1552		
	13.	KEROVUO et al., Applied and Environ. Biol. (1998) 64:2079-2085		
	14.	LIM et al., Nature Structural Biology (2000) 7:108-113		
	15.	NCBI GenBank entry AAB96873 phytase, 1997		
	16.	NCBI GenBank entry AAA16898 phytase, 1993		
	17.	NCBI GenBank entry AAB26466 phytase, 1993		
	18.	NCBI GenBank entry AAB96871 phytase, 1997		
	19.	OH et al., Abstracts of the General Meeting of the American Society for Microbiology (2000) 100:499-500		
	20.	PEN et al., Biotechnology (1993) 11:811-814		
	21.	RODRIGUEZ et al., Archives of Biochemistry and Biophysics (1999) 365:262-267		
	22.	RODRIGUEZ et al., Archives of Biochemistry and Biophysics (2000) 382:105-112		
	23.	VAN HARTINGSVELDT et al., Gene (1993) 127:87-94		
DL	24.	WITKOWSKI et al., Biochemistry (1999) 38:11643-11650		

Examiner Signature		Date Considered	7/10/06
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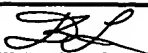
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Application Number	10/601,319
				Filing Date	June 20, 2003
				First Named Inventor	Jay M. SHORT
				Art Unit	1652
				Examiner Name	D. M. Ramirez
Sheet	2	of	2	Attorney Docket Number	564462001824

	25.	WODZINSKI and ULLAH, "Phytase," in Advantages in Applied Microbiology, Academic Press Inc., Vol. 42, (1996) pp. 263-302	
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ALTERNATIVE TO PTO/SB/08a/b (07-05)

Substitute for form 1449/P INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)			Complete if Known		
			Application Number	10/601,319	
			Filing Date	June 20, 2003	
			First Named Inventor	Jay M. SHORT	
			Art Unit	1652	
			Examiner Name	D. Ramirez	
Sheet	1	of	1	Attorney Docket Number	564462001824

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

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		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)					
DM	1.	WO-97/33976		09-18-1997	Korea Ins. of Science & Tech.		
DM	2.	WO-98/44125		10-08-1998	Korea Ins. of Science & Tech.		

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NON PATENT LITERATURE DOCUMENTS			
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DM	3.	European Search Report for EP 05 01 3009, mailed on October 7, 2005, 4 pages	
DM	4.	GUO et al., PNAS USA (2004) 101(25):9205-9210	

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			Filing Date	June 20, 2003	
			First Named Inventor	Jay M. SHORT	
			Art Unit	1652	
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		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
DR	1.	WO-01/90333	11-29-2001	Diversa Corp.		

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DR	2.	BRANDEN et al., Introduction to Protein Structure, Garland Publishing Inc., New York, (1991) page 247	
DR	3.	Supplementary Partial European Search Report for EP 02 74 4174, mailed on April 4, 2006; 7 pages	

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sd-311892